

Monitoring Data RecordProject Title: B-3157 (Michael's Branch Site) COE Action ID: 200020843WQC Number: 3467Stream Name: Michael's BranchCity, County and other Location Information: Davidson County, Bridge #74 & #76 over
SR 1242 and Michael's Branch and approaches on US 29/64/70 & I-85 Business.Date Construction Completed: 9/5/07 Monitoring Year: (4) of 5Ecoregion: _____ 8 digit HUC unit 03040103

USGS Quad Name and Coordinates: _____

Rosgen Classification: _____Length of Project: 876' Urban or Rural: Urban Watershed Size: _____Monitoring DATA collected by: M. Green and J. Young Date: 2/9/11

Applicant Information:

Name: NCDOT Roadside Environmental UnitAddress: 1425 Rock Quarry Road Raleigh, NC 27610Telephone Number: (919) 861-3772 Email address: mlgreen@ncdot.gov

Consultant Information:

Name: _____

Address: _____

Telephone Number: _____ Email address: _____

Project Status: Complete**Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.):** Level 1 2 3Monitoring Level 1 requires completion of *Section 1, Section 2 and Section 3*

Permit States: The permittee shall perform the following components of Level I monitoring each year for the 5-year monitoring period: Reference photos; plant survival (i.e., identify specific problem areas (missing, stressed, damaged or dead plantings), estimated causes, and proposed/required remedial action); visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. The permittee shall submit the monitoring reports to the Corps of Engineers, Raleigh Regulatory Field Office Project Manager, within sixty days after completing the monitoring. If less than two bankfull events occur during the first 5 years, the permittee shall continue monitoring until the second bankfull event is documented. The bankfull events must occur during separate monitoring years. In the event that the required bankfull events do not occur during the five-year monitoring period, the Corps of Engineers, in consultation with the resource agencies, may determine that further monitoring is not required. It is suggested that all bankfull occurrences be monitored and reported through the required monitoring period. The permittee shall perform and submit photo documentation twice each year (summer and winter) for the 5-year monitoring period, and for any subsequently required monitoring period.

Section 1. **PHOTO REFERENCE SITES***(Monitoring at all levels must complete this section)***Total number of reference photo locations at this site:****10 photos were taken from 5 photo point locations****Dates reference photos have been taken at this site:** 1/23/08, 8/15/08, 3/12/09, 8/10/09,
3/1/10, 9/17/10, 2/9/11**Individual from whom additional photos can be obtained (name, address, phone):** _____Other Information relative to site photo reference: A site map with photo point locations is included with this report.

Section 2. PLANT SURVIVAL

Attach plan sheet indicating reference photos.

Identify specific problem areas (missing, stressed, damaged or dead plantings):

The buffer downstream of Photo Point #3, on the left side of the stream had been mowed.

Estimated causes, and proposed/required remedial action: NCDOT replanted this area on 2/17/11 with yellow poplar and water oak and installed additional markers showing the line between the planted buffer and the sewer easement.

ADDITIONAL COMMENTS: Planted vegetation is surviving along the streambank and within the buffer area. Streambank reforestation included black willow, tag alder, elderberry, water oak, sycamore, yellow poplar, and green ash. Other vegetation noted: red maple, sweetgum, willow oak, pine, briars, sedge, multiflora rose, morning glory, cattails, *Juncus* sp., jewelweed, tearthumb, lespedeza, goldenrod, fennel, mimosa, and various grasses.

If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

Section 3. CHANNEL STABILITY

Visual Inspection: The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

Michael's Branch is stabilized for the Year 4 Winter evaluation, except for, the areas noted below. NCDOT live staked the eroded areas in March 2010 to help stabilize these areas. There was little or no change in these areas since the last evaluation. NCDOT will continue to monitor Michael's Branch.

| | | | | | |
|--|--|---|---|-------------------|-------------------|
| Date 2/9/11 | STA. 15+30 -Y2- (Additional Photo) | STA. 0+50 -Ramp C- (Additional Photo b/t PP#3 and PP#4) | STA. 1+00 -Ramp C- (Additional Photo b/t PP#3 and PP#4) | Station Number | Station Number |
| Structure Type | Crossvane | Crossvane | Crossvane | | |
| Is water piping through or around structure? | | Water piping under crossvane | Water piping under crossvane | | |
| Head cut or down cut present? | | | | | |
| Bank or scour erosion present? | Erosion on left bank at the end of crossvane arm | Erosion on right bank behind right crossvane arm | | | |
| Other problems noted? | | | | | |

Section 4. DEBIT LEDGER

The entire Michael's Branch stream mitigation site was used for the B-3157 project to compensate for unavoidable stream impacts.

Michael's Branch



Photo Point #1 (Upstream)



Photo Point #1 (Downstream)



Photo Point #2 (Upstream)



Photo Point #2 (Downstream)



Photo Point #3 (Upstream)



Photo Point #3 (Downstream)

Michael's Branch



Photo Point #4 (Upstream)



Photo Point #4 (Downstream)



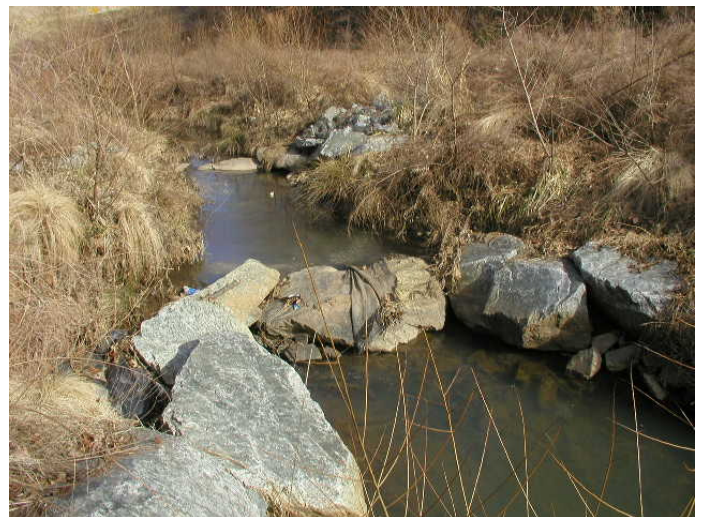
Photo Point #5 (Upstream)



Photo Point #5 (Downstream)



STA. 15+30 -Y2 - Erosion on left bank at the end of the crossvane arm located upstream of PP#1
Year 4 Winter - February 2011



Sta. 0+50 -Ramp C- Erosion behind right arm and water piping under crossvane located b/t PP#3 and PP#4

Michael's Branch

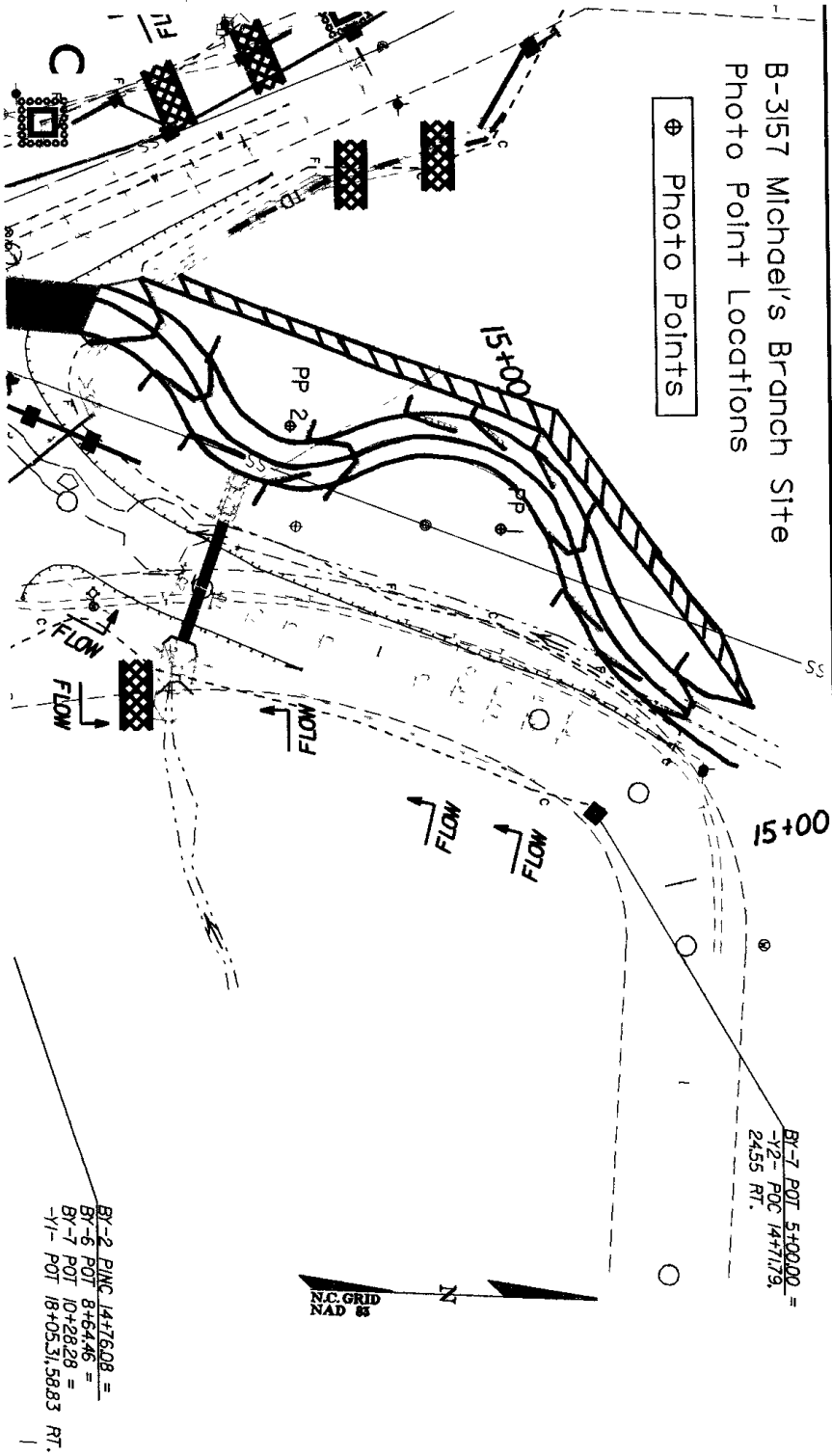


Sta. 1+00 –Ramp C- Water piping under crossvane located b/t PP#3 and PP#4

Year 4 Winter – February 2011

B-3157 Michael's Branch Site Photo Point Locations

⊕ Photo Points



B-3157 Michael's Branch Site Photo Point Locations

◆ Photo Points

